



## 4 Slot Conduction Cooled Chassis with Air Assist

VITA 48.2 Advanced Thermal Solutions  
400 Series AoC3U-410



Up to 400W of cooling power  
across 4 payload slots

AoC3U-410

Part of our AoC3U-400 Series of air-over-conduction cooled enclosures, the model 410 was developed to maintain safe operating temperatures for high power 3U VPX and SOSA aligned systems. High speed VPX systems demand leading edge solutions to manage hot, power hungry board payloads. The extensible ATR chassis design provides forced air cooling to widely available VITA 48.2 conduction cooled board sets with aggregate power demands of up to 400W. Custom and standard 4 slot backplanes (4 payload slots and 1 power supply slot) may include VPX and SOSA aligned slot profiles in combinations supporting high speed signal processing applications. The lightweight aluminum alloy chassis is sealed to provide ingress and EMI protection. Direct connect backplane and I/O panel ensures optimal signal integrity, eliminates cabling, improves shock and vibration performance and simplifies maintenance procedures.



### Features

- Cooling for up to 400W of total power
- 4 payload slots and 1 power supply slot
- Custom backplanes with VPX and SOSA aligned slot profiles
- Custom I/O panel with MIL-STD 38999 options for high speed copper, optical or RF signals
- VITA 62 pluggable power supply
- Designed to meet MIL-STD-810, MIL-STD-461, and MIL-S-901D
- Rugged bolt together construction
- Designed to meet 55C ambient temperature requirements
- Extensible design can be sized to accept a range of slot counts
- Chassis side walls contain cooling heat sink fins
- Side walls form enclosed air chambers isolated from the VPX modules
- Concentrated air flow runs co-planar to heat sink fins

### Benefits

- System integration services available
- Air assist cooling stretches VITA 48.2 module usage
- Compact lightweight design for SWaP sensitive applications

The AoC3U-410 is intended for use in high power, high speed C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) systems operating in mission critical defense applications.



## SPECIFICATIONS

### Physical

Dimensions: 7.75" H (w/ optional .25" mounting feet) 6.25" (W) x 9.875" (D) (11.13 w/ Handle)  
 Machined aluminum alloy 6061-T6, bolt together construction  
 Weight: Approximately 26lbs payload dependent

### Backplane options

Custom 4 +1 payload to power supply slot  
 backplane VPX and SOSA aligned slot profiles  
 10, 40 and 100GBase KR4 capable  
 VITA 66 and 67 optical and RF apertures

### Thermal

Operating: -40°C to 55°C  
 4 x high cfm fans  
 Max altitude 15Kft, 30Kft for sub 400W payloads  
 Thermal load: Up to 400W

### I/O Capabilities

Custom I/O panel supporting high speed connectivity  
 High density MIL-STD 38999 circular connectors  
 High speed 10GbE 38999 Hercules connectors  
 Rugged SMA connectors for RF and optical I/O

### Environmental

Shock: 30 Gs @ 11ms half sine  
 Vibration: 20 to 2000Hz at 5Gs  
 Designed to meet MIL-STD-810, 461, 167 and MIL-S-901D methods

### Payload Compatibility

3U VPX multi-core single board computers, high speed GPGPU and FPGA modules, video processing and Ethernet switching

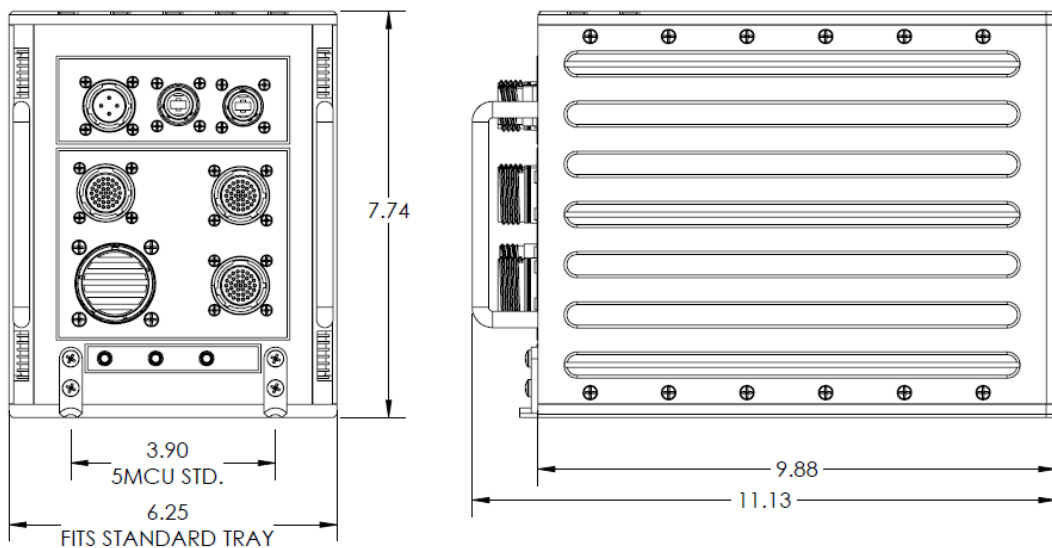
### Power Supply

1 VITA 62 pluggable power supply supporting 12 and 5V modules  
 MIL-STD-704E, MIL-STD-1275  
 Input voltage: 18 to 36 VDC  
 Output: up to 700W total

### Applications

Mission computing, software radio, digital recording systems, digital signal processing, high speed data acquisition, video displays in defense assets operating in demanding environments

## Chassis Dimensions



Example I/O Panel Shown

LCR provides a full line of VPX products and services - everything you need from development to deployment including; COTS rugged application ready chassis solutions as well as custom designs, custom 3U VPX backplanes supporting the latest slot profiles plus development tools including load boards and test fixtures.

### ORDER NUMBER

### DESCRIPTION

Consult LCR Sales

AoC3U-410 conduction cooled chassis with air assist for high power 3UVPX module payloads.  
 Part number and description based on final order configuration